

Higher Education's Role in *ONE MARYLAND*

**Report of the Higher Education Transition Work Group
to
Governor Martin O'Malley
and
Lieutenant-Governor Anthony Brown**

**Work Group Co-Chairs:
Freeman A. Hrabowski, III, and Clifford M. Kendall**

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I. EXECUTIVE SUMMARY

Maryland enjoys one of the finest systems of higher education in the nation. Investments in our colleges and universities, independent institutions, community colleges, and private and career schools are returned many times over in contributions to the State's economic, social, and cultural development. Such investments are essential for improving citizens' well-being and maintaining the State's overall competitiveness in today's knowledge-based global economy. **For the State to build a truly world-class system of higher education, Maryland will need to provide adequate and predictable funding for all segments of higher education.**

At the same time, demographic, fiscal, and technological trends pose urgent challenges that must be addressed if our colleges and universities are to be the elevators of opportunity that *ONE MARYLAND* requires for all of our citizens.

The Governor's Higher Education Transition Work Group¹, including leaders from the business, policy, and non-profit sectors, and representatives from all segments of higher education, conducted a series of meetings around the State; reviewed Federal, State, and local planning documents; heard presentations from the Governor's Workforce Investment Board, the Department of Business and Economic Development, the Maryland Higher Education Commission (MHEC), the Maryland State Department of Education (MSDE), and the higher education segment heads²; analyzed trends; identified challenges; and deliberated to produce a set of findings and make recommendations in four key areas -- quality and effectiveness, access, affordability, and accountability.

Meeting the higher education needs of Maryland's increasingly diverse population is so critical to ONE MARYLAND's economic future that it is addressed under each key area.

Quality

Key Findings: Maryland has an exceptionally well developed and highly regarded higher education system, in which the various segments cooperate on goals and priorities and play critical roles in keeping Maryland's increasingly high tech/low unemployment economy first in the nation in research and development expenditures per capita, and second in per capita income. Based on recommendations from various commissions, including most recently the Larson Commission, Maryland has recognized in statute its obligation to fund its four-year public colleges and universities at a level commensurate with their national peers. The State has also linked public support for its independent institutions and community colleges to the level of State support provided to its four-year public institutions, based on the Sellinger and Cade formulas, respectively. Thus, the

¹ See Appendix A for a complete list of Work Group members.

² See Appendix B for a complete list of interviewees.

success of our higher education system can be attributed not only to the quality and entrepreneurial spirit of the institutions themselves, but also to the thoughtful support of Maryland's elected officials and the larger community.

Challenges: Maryland's public institutions— research universities, comprehensives, and community colleges – and to a related extent its independent institutions, face enormous and growing challenges because of expected enrollment growth, changes in student demographics, and, especially, unpredictable State operating budget support. Moreover, many of the institutions have serious facilities problems as well as sub-standard technology that is insufficient to meet the needs of continuously evolving curricula, research, and development operations. Recent dramatic cutbacks in State funding have had an adverse impact on the academic quality of Maryland's institutions. Moreover, and as a result of these cutbacks, our students and their families have faced major tuition increases.

Recommendations:

- Support the current Maryland higher education funding structure that encourages cooperation among the public and private sectors of higher education, including the following:
 - funding four-year public institutions at levels that are competitive with their peers nationally; and
 - supporting the Sellinger State Aid Program for Maryland's independent institutions and the Cade Formula for funding community colleges.
- Support and encourage the recently appointed *Commission to Develop the Maryland Model for Funding Higher Education* to reaffirm the priorities set forth in the Higher Education Act of 1988 and the Larson Commission Report, in order to examine the important role of four-year and two-year public and private institutions as a starting point for the Commission's work.
- Invest in the enrollment growth of all segments of higher education in Maryland.
- Invest in the research capacity of universities, and recognize the critical importance of graduate and professional education in strengthening Maryland's workforce and advancing our knowledge-based economy.
- Continue Maryland's commitment to ensure fair funding to support the State's four Historically Black Colleges and Universities (HBCUs), as evidenced by its 1969, 1985, and 2000 agreements with the U.S. Department of Education's Office for Civil Rights.
- Undertake efforts to strengthen the attractiveness of Maryland institutions not only to students within the State, but also to national and international students, whose presence enhances our knowledge base, our cultural awareness and vitality, and our economic competitiveness.

- Develop a multi-year program for all segments of higher education to address both maintaining existing facilities and restoring them to a usable, efficient, and environmentally sustainable condition.
- Facilitate the approval of high-demand programs, particularly those designed to meet critical workforce needs.

And most important,

- **Provide adequate and predictable funding for all segments of higher education to build a truly world-class system of higher education.**

Access

Key Findings: Maryland anticipates substantial and growing enrollment pressures on its higher education institutions as its economy becomes increasingly dependent on a college-educated workforce, and as the Federal Base Realignment and Closures (BRAC) initiative brings more knowledge-based jobs to Maryland. According to estimates by the Maryland Department of Planning and the Maryland Higher Education Commission, higher education enrollments are expected to grow by approximately 57,000 students (equivalent to about four additional campuses) over the next 10 years. Two-thirds of these students will be of traditional college age; one-third will be adult learners returning for further education. Moreover, these students will increasingly be minority, immigrant, or first-generation college students. Further complicating matters are workforce shortage pressures, especially in such areas as engineering, teaching, pharmacy, and nursing, where current enrollments already fall well below Maryland's needs. These shortages will be exacerbated as anticipated demographic trends materialize.

Challenges: Perhaps no challenge in Maryland higher education is greater than that posed by the State's rapidly changing demographics. Maryland has a high concentration of African Americans, a rapidly growing proportion of Hispanics, and an increasing number of immigrants from a wide variety of nations. The traditional approach to educating students from these groups has not been effective in closing the educational attainment gap between them and the majority population. Adult citizens from these groups already are substantially under-represented among those holding college degrees. On average, the incomes of the families of potential students from these groups, and their degree of preparation for college-level work, are well below those of white residents. For Maryland, which is considerably more diverse than other states, the consequences of not strengthening academic achievement for these groups are so serious that sustained Statewide attention is necessary. K-12 and higher education must work together to help students (and their families) understand that higher education is an attainable and financially viable goal, that students' future economic well-being is tied to a higher education, and that the students should complete appropriate college preparatory courses in middle and high school to avoid wasting time and resources later in life. Because most of Maryland's colleges and universities are already at, or near, capacity, they will need to expand in order to respond to these enrollment pressures, particularly, though not exclusively, in workforce-shortage areas.

Recommendations:

- Convene a high-level group charged with developing new approaches to improving access for under-served student populations, considering such factors as resources, facilities, and programs required for student access, and performance and accountability measures for assessing success.
- Enhance the capacity of Maryland's colleges and universities to prepare students to compete in a global marketplace, providing them with a broad foundation in the liberal arts, so they develop the communication skills and cultural competencies that global competition demands.
- Create a seamless K-16 system that explicitly recognizes and addresses changing demographics, focuses on college preparation through curriculum development and early college initiatives, emphasizes science, technology, engineering, and math (STEM) education, and fosters academic success with the goal of graduating all students enrolling in college.
- Launch a major outreach effort directed toward minority, immigrant, and low-income parents and students that provides encouragement for continued education beyond high school, and information about college opportunities, loans and grants, and other forms of assistance.
- Encourage the State to remain a leader in distance learning, supporting institutions and providing additional access to educational opportunities through distance learning.
- Expand, as needed, the regional higher education centers as an effective and efficient way to support student capacity.
- Consider efforts to increase, where appropriate, the number of out-of-state and international students in our institutions, many of whom will remain in the State after graduation and will join Maryland's educated workforce.
- Expand and enhance services for the growing population of Adult Basic Education (ABE) and English for Speakers of Other Languages (ESOL) students, and consider the role that both MSDE and MHEC should play. Pay particular attention to the educational needs of Maryland's prison population.
- Support initiatives for collaboration between the private sector and Maryland's postsecondary institutions in addressing workforce shortages, including such strategies as strengthening scholarship and loan repayment programs in high-demand areas and building capacity at selected institutions.
- Explore the postsecondary needs of students with special needs, for example former special education students and adults with acquired disabilities, including Veterans.

Affordability

Key Findings: Regarding support for public four-year higher education, Maryland has traditionally been ranked as “moderate” in State investment, and “moderate to high” in dependence on tuition. In recent years, with downturns in the State’s economy and cutbacks in State support, coupled with mandatory increases in utility costs, and health, retirement, and other fringe benefits, tuition levels at the public institutions have become increasingly expensive. While Maryland ranks 4th in the nation in average family income, students from low and middle-income families, who may find it difficult to pay for college without incurring substantial debt, often end up dropping out or stopping out solely for financial reasons.

Challenges: Federal, State, and institutional grant and scholarship programs have not kept pace with tuition increases, causing some students either to incur unacceptably large loan burdens or to drop out or stop out. Many new students entering higher education are from low and middle-income families. In addition, a major and growing issue nationally and in Maryland is the plight of immigrant students, who often encounter cultural and financial barriers to pursuing higher education. This problem is even more challenging for undocumented students. While Maryland’s public institutions already waive residency requirements for in-state tuition for active-duty members of the Armed Forces, returning Veterans may need similar consideration depending on their individual circumstances.

Recommendations:

- Increase levels of need-based financial aid for low and middle-income students, including transfer students, and better align Federal, State, and institutional financial aid policies and programs.
- Focus on reducing students’ time-to-degree and increasing transfer of credits between two-year and four-year institutions (including institutional initiatives), as effective and efficient ways to address capacity issues and reduce college education costs.
- Increase support to the Distinguished Scholar Community College Transfer Scholarship Program to assist transfer students.
- Consider enacting an in-state tuition bill for undocumented students, provided that students have attended Maryland public schools for at least three years and have graduated from high school.
- Governing boards of public institutions should consider waiving in-state tuition residency requirements for returning Veterans as appropriate.

Accountability

Key Findings: Maryland’s postsecondary institutions place a strong emphasis on accountability for academic and fiscal performance. State-funded institutions are

required by law and through the budget process to submit annual detailed accountability reports, which compare performance not only against approved mission statements and strategic plans, but also against the performance of State-approved peer institutions. Governing boards also insist on accountability and conduct extensive performance reviews. The University System of Maryland (USM) Board of Regents, for example, has gained national recognition for its Effectiveness and Efficiency initiative, including an accountability system known as “dashboard indicators.” These indicators were developed to heighten accountability among institutions and their leadership for achieving performance goals, and also for effective and efficient management of their fiscal operations. In addition, Maryland’s public and independent colleges are subject to rigorous Middle States Association accreditation processes, and several have specialized professional accreditation in such areas as medicine, law, engineering, and teacher accreditation.

MHEC also plays a key role in working with the postsecondary segments of education and other key stakeholders, and developing the State Plan for Postsecondary Education, which identifies critical State issues and guides policy on postsecondary education.

Challenges: While all governing boards must ensure that their institutions are accountable to their various constituencies, public-sector boards face particular challenges in this regard. The extent and rigor of their accountability programs too often are unknown and unrecognized by the general public. Data are not always readily available to students as they choose an institution, or to employers seeking to hire graduates. Moreover, because student learning is often difficult to measure, and may not be apparent until several years after graduation, the national Spellings Commission is calling for higher education to develop a reliable set of outcome assessments.

Recommendations:

- Recognizing best practices, consider creating a broad-based advisory committee to assist in identifying, reviewing, and recommending appointments to all public boards, including MHEC, the USM Board of Regents, Morgan State University, St. Mary’s College of Maryland, the community colleges, and other governing or coordinating boards for which the Governor has appointment authority.
- Endorse the role of MHEC as the State’s coordinating body for postsecondary education, to facilitate the cooperative spirit of the State’s segments of higher education and establish, advance, and evaluate a Statewide policy agenda to ensure that it meets the needs of Maryland’s citizens.
- Continue to focus on accountability and ongoing efforts to contain costs for all segments while maintaining quality of higher education in Maryland, and make the results of accountability reviews widely available and widely publicized when appropriate.

- Encourage institutions to develop appropriate assessments of student learning outcomes and to use those measures to improve student achievement and the quality of educational offerings.

II. HIGHER EDUCATION IN MARYLAND

Overview

Maryland provides students with an array of options for higher education including research institutions, comprehensive colleges and universities, liberal arts colleges, community colleges, and private career and technical institutions.³

Approximately 45% of Maryland's high school graduates enter higher education immediately upon graduation. Seventy percent of Maryland's college-bound students matriculate in-state, and 30% enroll in institutions in other states. Though Maryland attracts large numbers of students from other states, it continues to be a net exporter. In contrast, Virginia, Pennsylvania, North Carolina, and Delaware are net importers of students.⁴

Of Marylanders who attend college in-state, 46% enroll in community colleges, 41% enroll in four-year public colleges and universities, and 13% enroll in private institutions.⁵ Given the State's large percentage of minority residents, Maryland's economic future is more heavily dependent on this population than is the case in many other states. Regarding the education of African Americans, for example, the role of Maryland's four historically black colleges and universities (HBCUs) deserves special emphasis. In FY05, these institutions accounted for 43% of the degrees awarded to African Americans by Maryland's public campuses.⁶

Maryland's Economic Vitality Depends on a Highly Educated Workforce

Maryland's dynamic economy has flourished in recent years largely because of the State's highly educated workforce and its focus on innovation. For the State's economy to remain competitive and continue growing in an age of globalization, Maryland needs to invest in a strong system of outstanding postsecondary institutions that are accessible, affordable, and accountable for their performance.

While retaining a highly diversified manufacturing and transportation base, Maryland has become a major technology center. According to the State New Economy Index, Maryland ranks second among all states in adapting to the "new economy" where

³ For a comprehensive list of Maryland's higher education institutions, please see Appendix C.

⁴ Source: U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Spring 2005, Table 2. Enrollment, residence, and migration of all first-time degree/certificate-seeking undergraduate students enrolled at Title IV institutions, by state: Fall 2004, available at <http://nces.ed.gov/pubs2006/2006155.pdf> (pg. 6).

⁵ Source: Maryland Higher Education Commission Trend Book 2006, pg. 46, available at <http://www.mhec.state.md.us/publications/research/AnnualPublications/2006TrendBook.pdf>.

⁶ University of Maryland University College (UMUC) accounted for an additional 18% of the African Americans who graduated from public institutions. It should be recognized, however, that in the case of UMUC, its main clientele is the non-traditional student attending on a part-time basis (89%), and its mode of delivering instruction is increasingly via online coursework. Hence, unlike the other campuses, its productivity is not an indicator of the degree of access the State provides to traditional college students, but rather for the non-traditional students.

“...ideas, innovation, and technology are embedded in all sectors... (Knowledge-based) industries now account for two-thirds of Maryland’s employment...”⁷

Maryland’s overall wealth and diversified job-base offer a tremendous platform for future growth. With more than a dozen Federal agencies and higher education institutions focused on research and development (R&D) in the State, Maryland’s R&D expenditures now rank second only to California’s – a state with seven times Maryland’s population and six times its gross state product. Maryland’s location, Federal support, and innovative public-private partnerships have produced this robust R&D sector, particularly in the biosciences, communications, and defense and information technology areas that will continue to thrive provided the State maintains and expands its talented workforce.

With a total workforce of 2.9 million, Maryland leads the nation in the percentage of the workforce 25 years of age and older with a bachelor’s degree or higher (37%), and in the percentage of its workforce employed as professional and technical workers (25%). The distribution of individuals with bachelor’s degrees or higher, based on race, is as follows: Asian – 59%; whites – 38%; African Americans – 27%; and Hispanics – 16%.⁸

Maryland’s public and private postsecondary institutions have played a central role in producing this workforce, not only those employees who work directly in high-tech occupations, but also the doctors, lawyers, accountants, teachers, artists, musicians, bankers, police, social workers, and the many other professionals who comprise Maryland’s workforce.

Moreover, colleges and universities are major generators of economic activity simply by virtue of their presence in communities. These institutions can be, and often are, the lifeblood of their neighborhoods and the economic backbone of their regions.

Workforce Challenges

Over the next several decades, Maryland’s population will become increasingly multimodal in age, race, national origin, and level of educational attainment. As members of the Baby Boom generation retire, its older, predominantly white, native-born, and college-educated workforce will give way to one that is younger, predominantly minority or immigrant, and less well-educated.

The trend lines are easy to plot. Maryland’s elementary and secondary public schools are becoming increasingly minority and immigrant. Currently, 48% of all students enrolled in K-12 are African American or Hispanic, in contrast to 35% of the overall population.⁹ High school graduation rates, already unacceptably low, especially for minority students from low-income families, are flat or declining, even with additional investments in funding K-12 education as a result of the Thornton Commission initiatives and an increased focus on student performance. African Americans continue to matriculate into

⁷ Source: <http://www.neweconomyindex.org/metro/introduction.html>.

⁸ Source: U.S. Census Bureau, Current Population Survey, 2005 Annual Social and Economic Supplement.

⁹ Twenty-nine percent of Marylanders are African American (fourth highest percentage in the nation) versus 40% of the public school K-12 enrollment. An estimated 6% of the overall population compared to an estimated 8% of the K-12 enrollment is Hispanic.

college at a rate well below their representation among recent high school graduates. They also tend to graduate from college at a lower rate than their white counterparts. The compounding effect of the achievement gap results in African Americans' representation among bachelor's degree recipients that is far below their representation in the college-age population. For example, the State would need to double immediately the number of degrees awarded to African Americans by its public and private institutions if African Americans were to have the same degree of representation among recent degree recipients as among recent high school graduates. On average, the difference between white, African American, and Hispanic students in terms of college preparation, measured by SAT scores, has not narrowed. In fact, for Maryland public high school seniors who took the SAT in 2006, the average combined score among whites was 1084, with Hispanics averaging 960 and African Americans averaging 842,¹⁰ placing African Americans slightly below their national peers.

Maryland will continue to experience substantial increases in its minority population. According to a 2002 study by the Maryland Department of Planning, minority residents are projected to be, by far, the fastest growing segment of the population – 86.5% of the projected increase between 2000 and 2010. Maryland's minority population is expected to be approximately 40% of the State's population by 2010.

Currently, Maryland compares well with other states in preparing students for college. However, an examination of the situation for low-income and minority students presents a more troubling picture. According to *Measuring Up: The Higher Education Report Card*¹¹ on Maryland in 2006,

- "...youth adults (ages 18-24) from low-income families are only two-thirds as likely as those from high-income families to earn a high school credential."
- "The chance that a 9th grader will enroll in college by 19 is only fair and has declined over the past decade...Among young adults (ages 18-24), the gap in college participation between whites and non-whites has widened substantially."
- Once enrolled, "Black students are only about three-quarters as likely as white students to complete certificates and degrees."
- "If all ethnic groups had the same educational attainment and earnings as whites, [annual] personal income in the state would be \$4.2 billion higher."

As reported by Tom Mortenson, author of *Postsecondary Education Opportunity*,

Maryland's public high school graduation rate ranks 22nd among the states, and its college continuation rate for its public and private high school graduates ranks 25th. The chance that a 19 year old Marylander will be enrolled in a college somewhere in the U.S. ranks 17th among the

¹⁰ Source: College Board, Maryland State Report, August 2006. (See Appendix D.)

¹¹ The National Center for Public Policy and Higher Education's report card for Maryland, 2006, titled, *Measuring Up: The National Report Card on Higher Education* is available at http://measuringup.highereducation.org/_docs/2006/statereports/MD06.pdf.

states. The chance that a low-income student from Maryland will reach college ranks 28th among the states....¹²

The percentage of Maryland's citizens with bachelor's degrees, or higher, is deceptively high because it includes people from other states and countries who have moved here. Between 1989 and 2002, for example, while the number of individuals with a bachelor's degree in Maryland increased by more than 400,000, 40% of this gain was attributable to adults moving here from outside the State. In fact, in terms of its college graduation rates, Maryland does less well than some other states that are similarly advantaged economically.

Thus, demographic changes present major challenges to State and local policy-makers as they address such issues as college costs, student academic readiness for college, and college retention and graduation rates, especially as the State seeks to fill important technology and industry jobs and as Baby Boomers increasingly retire from the workforce. In Mortenson's words, "As long as the nation's capital remains in DC, Maryland will do well compared to other states. But native Marylanders will fall farther behind the college educated immigrants to the state."

In fall, 2006, the higher education community in Maryland sponsored *Solutions for Maryland's Future*, a listening tour in which higher education partnered with the Maryland Department of Labor, Licensing, and Regulation and the Governor's Workforce Investment Board (GWIB). Participants met at locations across the State, and business and community leaders offered their assessment of higher education's response to workforce and economic development needs.

The broad themes that emerged include the following:

- working more closely with business and industry to keep pace with changing workforce needs, both current and future;
- strengthening higher education's relationship with K-12 to ensure that students are prepared to enter the workforce, and better prepared for college-level work; and
- expanding high-demand programs in response to workforce shortages and in regions currently underserved by the higher education community.

The Higher Education Transition Work Group heard these themes echoed -- especially concerns about existing and anticipated major shortages of engineers, teachers, nurses, pharmacists, and other health professionals -- from representatives of the Governor's Workforce Investment Board (GWIB), the Department of Business and Economic Development (DBED), and the Maryland State Department of Education (MSDE). Modest scholarship assistance and loan repayment programs dedicated to help meet some

¹² According to Mortenson, in FY05, Maryland ranked 41st among the states in its state tax fund investment effort in higher education. The national average investment was \$6.91 per \$1000. Maryland's investment was \$5.65.

of these shortages are currently available, and creative partnerships between the community colleges and the four-year institutions are underway.

Maryland's educational institutions, K-16 and beyond, have traditionally supported strong programs in the arts and humanities to ensure that our State continues to be served by well-rounded citizens. Maryland's future leaders in the public and private sectors need a solid background in the arts and humanities to nurture creative and critical thinking essential for success in our constantly changing environment. Much more will need to be done, however, to build capacity at the institutions to enroll, retain, and graduate students in these professional fields.

As Maryland's economy becomes increasingly dependent on college-educated workers, and as its population becomes more racially and ethnically diverse, the State's colleges and universities will need to attract students from backgrounds that historically include lower college attendance rates. It is critical that these students find college affordable and be well prepared to succeed academically and graduate. Accordingly, Maryland must ensure the following:

- increase the percentage of high school graduates who attend college;
- improve high school and college graduation rates for students, in general, and for minorities, in particular;
- promote programs and curricula that ensure a smooth transition for students between high school and college, in terms of both academic preparation and early dissemination of information regarding career preparation and available jobs;
- identify creative ways to provide financial support for students and families who have limited capacity to pay for college;
- improve higher education workforce diversity to reflect Maryland's level of racial and ethnic diversity;
- in areas of projected workforce shortages, increase the capacity of colleges to accommodate all academically qualified students who want to enroll in these critical fields;
- support institutions in increasing the numbers of highly qualified teachers in K-12, with special emphasis on STEM areas; and
- launch a major outreach effort directed toward minority, immigrant, and low-income parents and students that provides encouragement for continued education beyond high school and information about college opportunities, loans and grants, and other forms of assistance.

Quality

The State's Commitment to Quality Higher Education

According to the *Maryland Charter for Higher Education*, located in § 10-202 of the Education Article of the Maryland Annotated Code, "The people of Maryland expect quality in all aspects of public higher education: teaching, research, and public service." This commitment has been reaffirmed at various times, including in the report of the Larson Commission. We recommend that the legislative priorities in SB 682 enacted in

State Law in 1988, resulting from the Larson Commission Report, be the starting point for the forthcoming *Commission to Develop the Maryland Model for Funding Higher Education*. These priorities are as follows:

- fund USM institutions at levels comparable to their designated peer institutions, and the State’s flagship campus, the University of Maryland, College Park, be “provided with the level of operating funding and facilities necessary to place it among the upper echelon of its peer institutions;”
- maintain and enhance an academic health center and a coordinated higher education center for research and graduate and professional study in the Baltimore area (University of Maryland, Baltimore and University of Maryland, Baltimore County) with a focus on science and technology;
- support Towson University as the State’s largest comprehensive institution;
- enhance the HBCUs and recognize the unique role of the University of Maryland Eastern Shore as the State’s 1890 land grant institution;
- encourage and enhance higher education centers, such as the USM at Shady Grove Center in Montgomery County, through the use of technology, as centers of collaboration and access for underserved areas of the State; and
- recognize and promote the unique potential of UMUC to be a national and global leader in the new international marketplace of electronic and continuing education.

In addition, we recommend that the Commission support funding Morgan State University and St. Mary’s College of Maryland at levels equal to their designated peer institutions. We also recommend that the new Commission reaffirm and support the historic funding levels of the public four-year and independent colleges and universities and the community colleges as expressed in the Sellinger and Cade formulae.

An example of a very successful outgrowth of the State’s commitment to excellence was its creating and partially funding the Private Donation Incentive Program (PDIP). The PDIP was designed to help the public two and four-year colleges increase philanthropic support by providing matching funds, up to certain levels, to help the colleges and universities create endowed professorships and scholarships.

The Special Role of Research Universities in Fostering Economic Development

The State’s research universities -- Johns Hopkins University (JHU), the USM institutions, and Morgan State University -- play an exceptional role in strengthening Maryland’s economy through their research and development and related activities. Each year, Maryland’s research universities, public and private, generate over \$2.6 billion in externally-sponsored research and development (R&D) funding – \$1.7 billion from JHU, and \$900 million from the USM institutions – placing the State among the nation’s top leaders in R&D funding. Taking advantage of Maryland’s strategic proximity to Federal agencies and research labs (according to DBED, over a dozen Federal agencies carry out R&D work in 70 research centers located in Maryland), our State’s research universities have established well over 200 institution-based research centers in science and technology. The impact of their R&D activity on the State’s economy is profound. A

recent report by the Association of American Universities found that academic R&D in Maryland supports more than 55,000 jobs.

The impact of Maryland's research universities is not limited to the R&D dollars attracted, or even the number of jobs created; the State's research institutions also generate new knowledge, develop and market new technologies, and use the knowledge and skills of their faculties and researchers to serve the needs of the State. In FY05, for instance, USM research institutions filed 84 new patents, recorded over \$976,000 in income from technology transfer activities, and filed 190 invention disclosures. As a result of such activity, according to the most recent USM economic impact study, for every \$1 invested by the State in the USM almost \$3 are returned. For some institutions, e.g., the University of Maryland, Baltimore (UMB), with its affiliated hospital system, practice plans, research park, and over \$400 million in externally supported R&D, the return on the State's investment is more than \$16 to \$1.

The future of Maryland's research institutions is promising, but caution is also warranted. The work being done at Maryland's research universities in such cutting-edge areas as stem-cell and other regenerative medicine techniques, proteomics, pharmaceuticals, nanotechnology, signal processing, and communications shows great promise for further development and technology transfer. Enhanced investment in facilities and resources in these areas by the State and its research institutions should help Maryland maintain its leadership position in R&D. Competition for R&D dollars is increasing, however, while Federal support for R&D is flat or declining. Maryland has joined with other states, for example California and New Jersey, in increasing its public investment in research programs and institutions in a bid to become national leaders in such areas as the biosciences and nanotechnology; Maryland's investment, however, is relatively modest by comparison. To continue the State's traditional dominance in R&D, and to secure the jobs and economic development that flow from it, Maryland must continue, even enhance, its investments in quality facilities, programs, and faculty.

Through their graduate and professional education programs, colleges and universities have primary responsibility to develop human capital in these areas. Students in these programs are the next generation of researchers and innovators in these key areas.

The USM research institutions help drive Maryland's economic development by generating more than \$900 million annually in external support (FY05). At UMCP, the State's flagship institution, sponsored research totaled nearly \$330 million. UMCP has also opened its M Square research park. When completed, the 130-acre park will provide 2.5 million square feet of lab and incubator space and employ nearly 6,500 workers. UMB, the State's academic health center, generated \$410 million in external support. That level of research activity, combined with the activity generated by UMB's research park, practice plans, and hospital system, means that the university was responsible for over \$2.2 billion in total economic activity last year, (or \$16.54 in activity for each \$1 of State general fund investment). In addition, UMB, and its practice plans and affiliated hospital system also supported some 22,000 employees. The University of Maryland, Baltimore County (UMBC), which received \$76 million in R&D awards, is home to bwtech@UMBC, and estimates that over 2,200 jobs will be created once its technology center and research park have been completed. Moreover, Johns Hopkins Institutions

(including both the university and the health system) employ more than 47,000 people. In addition, the research parks of Maryland, located at JHU, UMCP, UMBC, UMB, and Montgomery College, promote economic development and job creation while supporting higher education's research mission, including technology transfer. The University of Maryland also includes two research centers, the University of Maryland Biotechnology Institute (UMBI) and the University of Maryland Center for Environmental Science, which conduct groundbreaking research in biotechnology and the environment, respectively.

Facilities Renewal

Maryland's postsecondary institutions have made major strides in providing new academic and professional opportunities for their students, finding new ways to deliver programs with increased efficiency and reduced cost, and expanding their capacity for research. Sustaining such progress and achievements is jeopardized, however, by the age and condition of many of the facilities in operation on the State's campuses.

The USM Board of Regents, Morgan State University, and St. Mary's College of Maryland have identified facilities renewal backlogs totaling approximately \$1.6 billion, \$160 million, and \$15 million, respectively. If the State is to address this problem effectively, a comprehensive approach is needed that provides both adequate funding for both recurring facility maintenance and, simultaneously, urgent facility renovations. Such an approach should not, however, be at the expense of the continued development of campuses that need additional capacity.

Though capital needs are not addressed specifically in this report, the Work Group is aware of enormous capital needs facing the State's four-year public institutions, particularly because of actual and anticipated growth in enrollment, especially in workforce shortage areas, and in sponsored research. Moreover, in some cases, existing facilities may be so technologically obsolete and require such enormous renewal expenditures to remain useful, that replacement may be a simpler and ultimately less expensive solution. Similarly, the independent institutions have identified \$330 million, and community colleges \$100 million, in capital projects eligible for State support.

At the same time, today's engineers and architects have developed approaches to constructing new facilities and renewing older ones that substantially enhance their efficiency and reduce their impact on the environment. The State has an unprecedented opportunity not only to provide all segments of higher education with outstanding facilities that support and capitalize on institutions' strengths, but also to play a leadership role in creating a national model of sustainable campus renewal. This might well take the form of a matching grant program, similar to the Private Donation Incentive Program (PDIP), which has been used very successfully in building endowments at the public four-year institutions.

We recommend, therefore, that the State develop a program to address, over time, the backlog in maintaining existing facilities, and the need for a greatly expanded capital program, paying particular attention to developing, restoring, and maintaining environmentally sustainable physical plants.

Access

Statistics show that 80% of the fastest growing careers over the next 10 years will require some college education. The guiding principle, established in the 2004 Maryland State Plan for Postsecondary Education,¹³ clearly summarizes the Work Group's recommendation regarding access. All Maryland residents who can benefit from postsecondary education should be able to do so affordably.

There is no doubt that the changing demographics portend a new reality for our State, and that new reality may require a dramatic departure from traditional ways of thinking about institutional missions, academic support programs, institutional funding levels, and measures of institutional effectiveness and accountability. Fundamental to any shift in thinking and approach will be a greater appreciation for the magnitude of change in demographics and its implications for the quality of life of citizens and the general welfare for the State.

Capacity Issues

MHEC estimates that our colleges and universities will need to accommodate approximately 57,000 more traditional and non-traditional students over the next 10 years, many of whom will be less advantaged than those already enrolled and representing an enrollment increase equivalent to four moderately sized institutions. In addition to this increase, the State will also experience a migration of more than 24,000 residents into Maryland by 2011, as the result of the Federal Base Realignment and Closures (BRAC) initiative. BRAC presents major opportunities for Maryland in terms of creating jobs and attracting new residents, but it also is expected both to exacerbate workforce pressures in areas already identified as being short of qualified employees and to add to the strain on the capacity of the State's colleges and universities.¹⁴ To respond effectively to anticipated enrollment increases, including, for example, meeting increased instructional workload demands, providing adequate student academic support services, and increasing the capacity to meet selected workforce needs, institutions will need stable and predictable State funding.

The Work Group heard from the business, health, and K-12 education communities that Maryland is experiencing severe workforce shortages in a variety of areas, including, but not limited to, engineering, teaching, pharmacy, nursing, and sub-specialties (e.g., biotechnology). A number of strategies have been implemented in an effort to address these shortages. In nursing, for example, the workforce shortage is caused in part by the insufficient numbers of master's and doctoral-level faculty in our various associate and baccalaureate nursing programs. The State has implemented scholarship programs to encourage nurses in the field to return for advanced education. Similar programs are under development to address the acute shortage of mathematics and science teachers. If

¹³ The Maryland Higher Education Commission's *2004 Maryland State Plan for Postsecondary Education* is available at http://www.mhec.state.md.us/highered/2004Plan/MHEC_PostSec04.pdf.

¹⁴ The USM Board of Regents has guaranteed in-state tuition rates without the waiting period normally required to establish state residency to students whose families relocated as a result of BRAC.

the State's colleges and universities are to meet these workforce needs, however, scholarship assistance is not enough; the institutions, themselves, must have the additional capacity needed to accommodate the increased enrollment.

As a result of Maryland's changing demographics, community colleges will be increasingly important to our future. First-generation college and minority students tend to begin their education in community colleges (disproportionately). Since these students account for much of the growth in the State's population, we must ensure that our community colleges continue to be academically strong, attuned to the needs of the workforce, and connected to their local communities, local public schools, and the State's four-year colleges and universities. Helpful initiatives include dual enrollment courses for qualified high school students, programs designed to address critical workforce and professional shortages, rapid response training to meet local business and employment needs, and other strategies to maintain open-access enrollment for all eligible citizens, as the changing nature of work and technology also calls for increased State effort to support the education of adults. Community colleges and UMUC have a tradition of focusing on continuing education for returning adult students. The future economy will require Maryland's higher education institutions, in general, to focus on the needs of these workers.

Given the population's mobility and sustained workforce shortages in such areas as teaching and nursing, Maryland should consider funding for out-of-state students in community colleges. In addition, as is currently done for active-duty members of the Armed Forces, governing boards should give special consideration to waiving the one-year residency requirement for returning Veterans who declare Maryland their home of residence.

Transfers from Community Colleges

The percentage of community college students transferring to Maryland public four-year institutions has been increasing over the past few years and is now nearly 24%, a five-year high. To ensure a seamless transition process for these students, the USM and the Maryland Association of Community Colleges (MACC) have been working together and focusing on (1) increasing access through higher education centers, alternative delivery methods, need-based scholarships and transfer scholarships, (2) using technology to enhance the transfer function, and (3) applying best practices in transfer.

Traditional Students – Improved High School/College Matriculation

A large number of Maryland's college students – including many of those who matriculate immediately upon graduating from high school – lack the reading, writing, math, and critical thinking skills they need to succeed when they enroll in the State's institutions. In fact, assessments show that nearly half (48.3%) of the State's high school graduates in 2004-2005 who enrolled in a Maryland college or university directly from high school required remediation in math, reading, or writing. Despite recent K-16 initiatives, public schools continue to need substantial improvement.

Maryland's K-12 structure is critical to higher education in the State because it serves as the primary "pipeline" for students. Currently, Maryland public schools serve almost one million students across 24 jurisdictions and in 1,600 schools. Of these students, 30% are economically disadvantaged, 14% have special educational needs, and for 5%, English is not their native language. Given these demographics, high school is of course too late to begin the college-preparation process. Rather, K-12 and higher education should partner to reach students in middle school and earlier. In turn, higher education must articulate its expectations of entering students from K-12. To that end, higher education should focus even more attention on meaningful research designed to support public K-12 educational outcomes.

Students with Special Needs

The phrase "all Maryland residents" includes those with mental health and sensory issues, the physically challenged, and those with learning disabilities. The State should strive to incorporate fully all citizens into our society. Higher education is a key resource in preparing members of this population to become productive citizens. We support efforts -- as other states have successfully done -- to promote the full inclusion of these citizens in appropriate and relevant education.

Adult Basic Education (ABE), English for Speakers of Other Languages (ESOL), Prisoners

Adult Basic Education (ABE) serves primarily three student groups: (1) high school drop-outs who want to earn a high school equivalency (GED) certificate; (2) individuals needing basic skills in reading, writing, and math; and (3) individuals whose first language is not English, who may or may not be highly educated, and need to improve their English language skills. The latter classes are sometimes referred to as English for Speakers of Other Languages (ESOL).

The demand for ABE in Maryland substantially exceeds current capacity. ABE programs serve approximately 35,000 individuals.¹⁵ Nearly 80% of the students are African American, Hispanic, or Asian, and 28% of ABE students are unemployed. According to a December, 2005 report by MSDE, nearly 1,000,000 Marylanders are eligible for ABE services, though only 3-5% of this target population are currently being served.

Maryland also significantly lags behind other states in funding ABE, and there is a documented, direct connection between educational attainment and earnings.¹⁶ A report recently published by the Superintendent's Panel on Excellence in Adult Education¹⁷ offers the following recommendations: (1) to achieve results, establish in statute a State funding formula for adult education; (2) consolidate three existing State funding streams

¹⁵ More than half of the students in ABE classes are at community colleges.

¹⁶ The State spent \$77 per student in FY03, 84% below the East Coast average. The average East Coast state investment per student in FY03 was \$477, more than six times the amount that Maryland invested.

¹⁷ The full-text of *Stepping Up to the Future: Findings and Recommendations from the 2005 Superintendent's Panel on Excellence in Adult Education* is available at <http://www.marylandpublicschools.org/NR/rdonlyres/07809A87-CDB7-4038-B6B9-D34C0B5658EA/8366/FINAL2SuperintendentsReport.pdf>.

for adult education within MSDE; (3) encourage workplace partnerships with businesses and provide incentives; and (4) publish an annual State performance report on the adult education program to document accountability. These recommendations warrant serious consideration.

Of special concern to Work Group members are the educational needs, particularly but not exclusively ABE-related, of Maryland's large prison population. According to the most recent annual data (2004) from GWIB, more than 150,000 ex-offenders were released from prison or jail in Maryland. The Work Group recommends that the State provide more education and training "inside the walls," and avenues to transition individuals back to the community. Maryland can and must do better in this regard.

Undocumented Immigrant Students

A large and growing issue, nationally and in Maryland, is the plight of undocumented students, who often encounter cultural and financial barriers to pursuing higher education. In 1982, the U.S. Supreme Court ruled in *Plyler v. Doe* that all children, with or without documentation of citizenship, are entitled to elementary and secondary education. Yet, a high school diploma is no longer sufficient in many cases for entry-level jobs. Currently, Maryland's undocumented students are ineligible for any form of financial aid and would be classified as out-of-state for tuition purposes, even though they may have lived in Maryland for several years. In response to this situation in other states, some of those states have revised their policies related to access and affordability of higher education for undocumented students.¹⁸ Seven states, including Texas and California, have enacted changes that permit undocumented immigrant students to pay in-state tuition rates under certain conditions.

These demographic changes will require various professions to re-evaluate their expectations with regard to cultural competence. In 2005-2006, Maryland's foreign-born population grew from approximately 518,000 to more than 640,000, an increase of nearly a quarter. These newcomers make up a growing share of the State's population and may support the workforce and generate additional tax revenues. Therefore, Maryland should consider enacting an in-state tuition bill for undocumented students, provided that the students have attended Maryland public schools for at least three years and graduated from high school.

Improving Access through Distance Learning

Since its introduction in the 1990s, distance education has quickly become an important tool to help higher education become more accessible. MHEC defines distance education as education or training delivered off-campus via electronic technologies including video, audio, and computer-based technologies. Through online courses, institutions can offer educational opportunities to students who face challenges related to geographic distance,

¹⁸ According to the National Conference of State Legislatures, more than 20 states, including Maryland, have introduced bills addressing in-state tuition rates for undocumented immigrants since 2001. Maryland's proposed legislation was adopted in both houses of the General Assembly, but was later vetoed by the Executive.

work, family obligations, or limited mobility because of disability. Maryland is fortunate to have one of the most sophisticated and wide-reaching distance education environments in the nation.

With an unduplicated distance-education headcount enrollment of 30,789 students in FY04, UMUC accounted for 88% of all distance education students among the State's four-year public institutions.¹⁹ To meet this level of student demand, UMUC created WebTycho, its proprietary online learning platform. UMUC provides online student orientation and training courses, online faculty training, and online student services ranging from library services and academic advising to financial aid and technical support. UMUC currently shares its expertise in distance learning with over 200 other institutions both within and outside Maryland.

While the majority of distance education in the State is currently offered by UMUC, many institutions, both two-year and four-year, are increasingly utilizing distance education and its related technology to help provide access to postsecondary education for adult or other non-traditional students, and to students in underserved areas of the State. Some of these institutions use distance education technology to deliver courses and programs in formats that blend more traditional delivery with technology to enhance instruction and learning.

Maryland also has MarylandOnline (MOL), a consortium of colleges and universities dedicated to pooling their resources and expertise to enhance online educational opportunities in the State. MOL currently has 19 member institutions, representing public and private, two-year and four-year institutions in the State. MOL provides faculty training, technical assistance on developing online courses, a seat bank that allows students to take online courses at other member institutions, and a collaborative online general studies degree program. Like UMUC, MOL is poised to help Maryland institutions develop leading online programs, and the State should be supportive of these and other institutions. The Work Group encourages the State to maintain its leadership role in distance learning and to support institutions, and provide additional access to educational opportunities through this approach.

Globalization

The emerging global economy requires that we expand our educational boundaries beyond the State. We recommend that the Administration undertake efforts to strengthen the attractiveness of Maryland institutions, not only to our own students, but also to national and international students, whose presence enhances our knowledge base, our cultural awareness and vitality, and the economic competitiveness of our State.

The 2004 Maryland State Plan for Postsecondary Education focuses, understandably, on the needs of students graduating from Maryland high schools. It also recognizes that the

¹⁹ The second largest four-year institution had 1,340 students enrolled in distance education classes; the largest community college had 4,602. (Data are for FY 2004.) Source: MHEC's 2005 report titled *Distance Learning at Maryland Colleges and Universities, Academic Year 2003-04*,

economic health of Maryland depends increasingly on the State's ability to compete effectively in a global marketplace. For the benefit of our own students and the State, as a whole, it is essential that we find both new and better ways to prepare Marylanders to participate in that marketplace. Such preparation must include not only strong education in scientific and technical areas, but also a broad foundation in the liberal arts, where students develop communication skills and cultural competencies demanded by global competition. Enhanced opportunities to study abroad could be beneficial in this regard.

Affordability

Insufficient financial resources should not be a barrier for capable students to attend college. Affordability requires balancing tuition levels, family incomes, and financial aid, and at our public colleges and universities, tuition levels are directly related to levels of State support. Maryland has a long history of relatively high tuition levels among its public institutions. In fact, the State ranks 12th nationally in terms of tuition levels among its four-year public institutions and 16th at its community colleges. At the same time, public support for higher education is moderate, with Maryland ranking 20th nationally in State support in FY04. Further, Maryland traditionally has provided only modest levels of State need-based aid, ranking 23rd among the states on this measure in FY05. While Maryland families have high median incomes - Maryland ranks 4th nationally on this measure - the statistic is misleading, particularly for minority and immigrant families, and affordability is affecting access for students with family incomes in the low to moderate ranges. *Measuring Up: The National Report Card on Higher Education*, has given Maryland a grade of "F" for affordability.

This situation is exacerbated by the lack of consistency, year-to-year, in State funding for higher education. The fluctuations in funding²⁰ have an adverse impact on the academic quality of Maryland's institutions. Sharp reductions in State support lead to significant tuition increases, frequently without corresponding increases in State need-based aid.

Further, the balance between State funding for postsecondary institutions and the cost to individual students to attend has shifted, with a far greater burden being borne by students than ever before. We cite again the importance of the *Commission to Develop the Maryland Model for Funding Higher Education* as it works to address the serious fiscal challenges facing higher education in Maryland, and to ensure accessibility and affordability to citizens of the State.

Need-Based Aid

Students receive need-based grants from three primary funding sources - Federal (chiefly the Pell Grant), State, and institutional. The Federal Pell grant is one of the largest sources of assistance but has not kept pace with college costs.

Maryland currently provides more than \$110 million annually in State student financial assistance, an increase of more than 35.7 percent, or \$29 million, since FY 2002.

²⁰ See Appendix E for the percentage total of the State's general funds appropriated by year, FY98-07, and changes in resident undergraduate tuition and fees by year, FY98-07.

Approximately 76% of these funds, or \$84 million, are targeted for need-based assistance. Need-based aid is awarded to students enrolled in public or independent four-year colleges and universities, as well as to students at community colleges, to support access -- regardless of students' choice of institution.

State Need-Based Aid Allocation by Segment: FY 2006

College System	Enrollments	Recipients	Aid Funds
Community	37%	30%	15%
Public 4-Year	45%	52%	64%
Private	18%	15%	20%

The State has substantially increased need-based aid since FY04, more than doubling these funds during this period. Further, in addition to an increase in need-based aid, MHEC has implemented many changes in the State's need-based aid programs and policies to address the growing needs of an increasingly diverse group of students, including traditional and non-traditional, part-time, first-generation, and graduate and professional students. The changes, among others, were enacted to improve college affordability for all students:

- Increased the percentage of need under the Educational Assistance Grant (EAG) Program to 60% for students enrolled in community colleges and 40% for students at public four-year and independent institutions and increased the maximum award to \$3,000 for all students;
- Expanded funding and award amounts under the Part-time Grant Program and Graduate and Professional need-based grant programs;
- Implemented the campus-based EAG program targeting funds to support low-income students eligible for Pell Grant;
- Enhanced outreach efforts to assist middle and high school students by providing information on the importance of college, pre-college preparation, and application processes for admission and financial aid.

Such policy changes in State programs are critical to ensuring that programs support a more diverse student body. However, more needs to be done to correct the long-standing shortfall in access for needy students.

For example, the Distinguished Scholar Community College Transfer Scholarship Program is a State initiative implemented in FY07 to assist transfer students. The program provides merit-based assistance to high-ability students attending community college, and transfers to four-year institutions in Maryland. While transfer students receive consideration for need-based aid, most of the merit aid available for students enrolled at four-year institutions is offered to students as freshmen. This program provides students with an annual award of \$3,000 when they transfer to a four-year institution. Currently, funds are not available to support all eligible students. The Work Group recommends increasing support to fund fully the Distinguished Scholar Community College Transfer Scholarship Program to assist transfer students.

Time-to-Degree

The 2004 Maryland State Plan for Postsecondary Education recommends that MHEC work with the segments to develop and implement a Statewide program to reduce time-to-degree. Crucial to achieving this objective is improving the efficiency of transferring credits from two-year to four-year colleges. For example, the USM Regents Effectiveness & Efficiency Work Group has developed and approved strategies to reduce time-to-degree for students at USM institutions in order to increase the number of students served. These policies are designed to create sustainable, systemic change in the way students move through USM institutions by limiting the total number of credits required for the degree, enhancing online course offerings, improving academic advising, and providing additional need-based financial aid.

While the process for determining transferability of students' general education credits has improved in recent years, requirements for particular majors, and variability among those requirements, result in community college students needing more credits, on average, to complete their degrees. A variety of models has emerged to address this challenge. For example, implementation of an Associate of Arts in Teaching (AAT) degree guarantees transferability of credit among all the State's public institutions. Another effort underway is the creation of an Associate of Science in Engineering degree also similarly transferable. These models are based on students' competency, rather than on course-by-course transfer. We recommend that the State's two-year and four-year institutions continue their efforts to expand these competency-based transfer initiatives into other areas, with priority being given to those academic areas in which large numbers of community college students transfer to four-year colleges and universities.

Dual Enrollment

Some Maryland schools are exploring early student access to college through dual enrollment in high school and institutions of higher education. Such enrollment provides high school students with opportunities to earn college credits and accelerate their time-to-degree. The current challenges associated with dual enrollment include debate over who pays tuition, what amounts should be charged, and which institution – high school or college – should receive credit in State and local funding formulae for the students.

Accountability

Higher Education Governance and Coordination

Maryland's Governor, with the advice and consent of the Senate, appoints the members of the Maryland Higher Education Commission, USM Board of Regents, and the governing boards of Morgan State University and St. Mary's College of Maryland, and Maryland's community colleges.

Each of Maryland's independent institutions is governed by its own board, with existing board members appointing new members. They also have a Statewide advocacy and policy leadership organization, the Maryland Independent Colleges and Universities Association (MICUA), whose members include the Presidents of the institutions. The

community colleges have a similar Statewide advocacy board, the Maryland Association of Community Colleges (MACC).

In a number of states where the Governor holds such appointment authority, there is a broad-based advisory committee that assists the Governor by identifying, reviewing, and recommending appointments to the public higher education governing boards and the state coordinating board.

The Work Group supports the creation of a broad-based advisory committee to assist in identifying, reviewing, and recommending appointments to the USM Board of Regents, MHEC, and all other governing or coordinating boards for which the Governor has appointment authority. Establishing such a review process would help to identify and recruit well-qualified candidates who (1) understand and accept the responsibilities of board/commission membership, (2) are committed to the future of higher education in Maryland, and (3) reflect the constituencies that contribute to the increasingly diversified funding base of colleges and universities, e.g., alumni, donors, the corporate community, and other segments of our State. Potential board members should be advised clearly of State ethics policies and counseled about managing actual and potential conflicts of interest before any such appointments are made.

In general, because trustees of public colleges and universities have such long-term and consequential influence on the educational, economic, social, and cultural well-being of the State and its citizens, merit review and recruitment have been found to be critical best practices. A considered, transparent process helps governing boards function more effectively as non-political instruments of the public good, and it conveys to the public (and the media) that elected political leaders are committed to practicing effective governance. Finally, the Work Group recommends that MHEC meet regularly with segment heads to promote collaboration among institutions and to support the development and implementation of the State's public policy priorities in higher education.

Measures of Accountability

Whether they are called the USM Board of Regents' *Dashboard Indicators of Effectiveness and Efficiency*, the Department of Budget and Management's *Managing for Results*, or the Maryland General Assembly's *Performance Accountability Reports* that are submitted via MHEC, Maryland's public four-year institutions have, for the past several years, used data-driven measurements of performance to guide budget decisions and enrollment policy.²¹ Community colleges and independent institutions have developed and reported similar metrics in their respective sectors.

Institutions are still working, however, very intentionally to develop appropriate measures of student-learning outcomes. The focus on such measures is being increased by the U.S. Department of Education and regional accrediting organizations. We recommend that the State continue to encourage institutions to develop appropriate

²¹ The USM Board of Regents dashboard indicators can be found on the university system's website. The other measures are also publicly available in a variety of places including the Governor's Annual Budget.

assessments of student-learning outcomes and to use those measures to improve student achievement and the quality of educational offerings. We recommend continued use of these indicators.

Higher education is subject also to a variety of outside evaluations, including those conducted by regional accrediting bodies for overall institutional accreditation (in Maryland's case, the Middle States Association of Colleges and Universities), and by a variety specialized accrediting agencies and licensing bodies for teaching, engineering, medicine, nursing, pharmacy, and a host of other disciplines.

APPENDICES

APPENDIX A

Higher Education Transition Work Group Members

Higher Education Transition Work Group Co-Chairs

Freeman A. Hrabowski, III
Clifford M. Kendall

Higher Education Transition Work Group Staff

Bernard Holloway
Veronica Jones
Corey Williams Green

Higher Education Transition Work Group Members

Michael Anselmi	Mary Leach
Bilal Ayyub	Andrea Hill Levy
Brian Bailey	Allan Lichtman
Calvin Ball	Tracy Miller
Robert Bogomolny	E. Gnanaraj Moses
Ida Brandon	Mohammed Mughal
Jaqueline L. Brown	Charlene Nunley
Mickey Burnim	Karl Pence
Robert Caret	Joseph Popovich
Alan Cheung	Julie Porosky Hamlin
Ann Ciekot	Dehlly Porras
James Clements	David Ramsay
Adria Crutchfield	Earl Richardson
William Destler	Sara Russell
James Dyke, Jr.	Elaine Ryan
Janice Doyle	Angela Rye
Kamala Edwards	Adil Shamoo
Robin Elliott	Donald Slowinski
Dallas Evans	Joseph Smith
Jorge Fujigaki	Clemmie Solomon
Beth Garraway	Rhonda Spells
Crystal Gonzales	Julian Spierer
Keith Greer	Ashley Staubs
Thomas Ha	Gloria Thomas
Michael Harsh	Thomas Tucker
Judy Hendrickson	Sanford Ungar
Ronald Holden	Paul Warner
Phillip Jackson	H. Clay Whitlow
Orlan Johnson	Jean Wicks
Steven Knapp	Ruth Zambrana
Jennifer Kramer	

APPENDIX B

Interviewees

The Higher Education Transition Work Group conducted a series of meetings at institutions across the State; including Anne Arundel Community College, Bowie State University, the Universities at Shady Grove, the University System of Maryland at Hagerstown, and the College of Notre Dame.

During the Work Group's meetings on December 22, 2006, and January 3, 2007, interviews were conducted with leaders from Maryland's business, policy, and non-profit sectors. Interviewees included,

Tina Bjarekull
President
Maryland Independent College and University Association

Thomas Botzman
Vice President for Business & Finance
St. Mary's College of Maryland

Calvin Burnett
Secretary of Higher Education
The Maryland Department of Higher Education

Gino Gemignani
Chair
The Governor's Workforce Investment Board

Nancy Grasmick
State Superintendent of Schools
Maryland State Department of Education

James Fielder
Secretary, Labor, Licensing & Regulation
The Governor's Workforce Investment Board

Brit Kirwan
Chancellor
University System of Maryland

Andrea Mansfield
Assistant Secretary for Finance Policy
The Maryland Department of Higher Education

Aris Melissaratos
Secretary of Business and Economic Development
The Department of Business & Economic Development

Earl Richardson
President
Morgan State University

Robert Seurkamp
Executive Director
The Governor's Workforce Investment Board

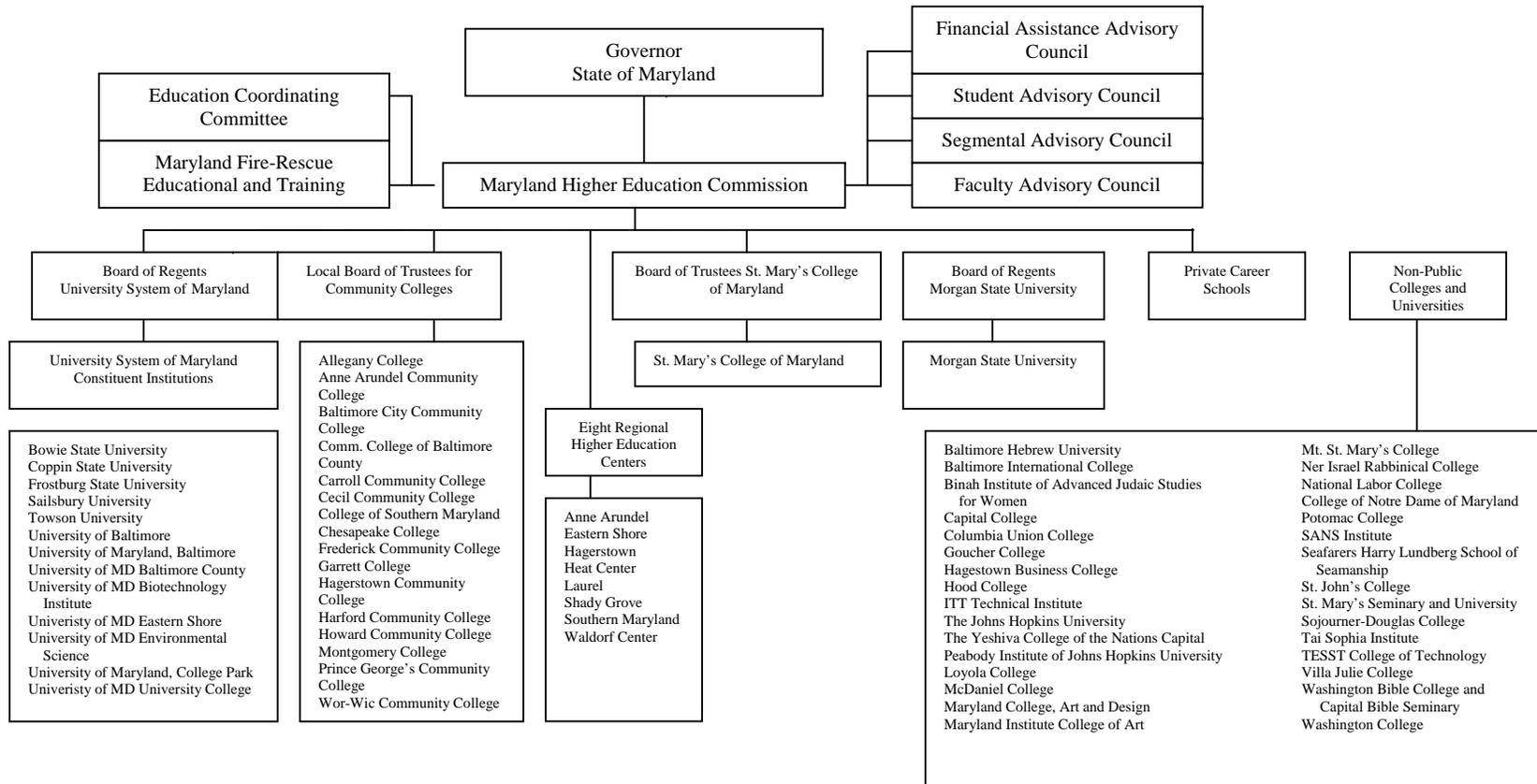
David Sumler
Assistant Secretary for Planning and Academic Affairs
The Maryland Department of Higher Education

H. Clay Whitlow
Executive Director
Maryland Association of Community Colleges

APPENDIX C

- 1. Organizational Chart of Higher Education in Maryland**
- 2. Maryland's Four-Year Public Colleges and Universities, Community Colleges, Four-Year Independent Colleges and Universities, and Two-Year Independent Colleges**
- 3. Private Career Schools in Maryland**

1. Organizational Chart of Higher Education in Maryland



2. Maryland's Four-Year Public Colleges and Universities, Community Colleges, Four-Year Independent Colleges and Universities, and Two-Year Independent Colleges

Four-Year Public Colleges and Universities

University System of Maryland
Bowie State University
Coppin State University
Frostburg State University
Salisbury University
Towson University
University of Baltimore
University of Maryland, Baltimore
University of Maryland, Baltimore County
University of Maryland, College Park
University of Maryland Eastern Shore
University of Maryland University College

Morgan State University
St. Mary's College of Maryland
United States Naval Academy

Community Colleges

Allegany College of Maryland
Anne Arundel Community College
Baltimore City Community College
Carroll Community College
Community College of Baltimore County

Catonsville Campus
Dundalk Campus
Essex Campus

Cecil Community College
College of Southern Maryland
Chesapeake College
Frederick Community College
Garrett College
Hagerstown Community College
Harford Community College
Howard Community College
Montgomery College

Germantown Campus
Rockville Campus
Takoma Park/Silver Spring Campus

School of Art and Design at Montgomery College

Prince George's Community College
Wor-Wic Community College

Four-Year Independent Colleges and Universities

Baltimore Hebrew University
Baltimore International College
Binah Institute of Advanced Judaic Studies for Women
Capitol College
College of Notre Dame of Maryland
Columbia Union College
Goucher College
Hood College
ITT Technical Institute
The Johns Hopkins University
Peabody Institute
Loyola College in Maryland
Maryland Institute College of Art
McDaniel College
Mount St. Mary's University
National Labor College
Ner Israel Rabbinical College
St. John's College
St. Mary's Seminary and University
SANS Institute
Sojourner-Douglass College
Tai Sophia Institute
Talmudical Academy of Baltimore
The Women's Institute of Torah Seminary/Maalot of Baltimore
Villa Julie College
Washington Bible College and Capital Bible Seminary
Washington College
Yeshiva College of the Nation's Capital

Two-Year Independent Colleges

Hagerstown Business College
Seafarers Harry Lundeberg School of Seamanship
TESST College of Technology

3. Private Career Schools in Maryland

Schools approved by the Maryland Education Commission
(For additional information, please see www.mhec.state.md.us)

ALLIED HEALTH

AccuTech Career Institute
Adventist HealthCare:
Health Careers Training Center
All-State Career School
American Red Cross, Central Maryland Chapter
Americare School of Allied Health-Silver Spring
Baltimore Academy of Nursing Assistants
Bethel Healthcare Institute, Inc.
BioTechnical Institute of Maryland
Cambridge Nursing Assistant Academy
DATS of Maryland & Virginia, Inc. at Columbia
DATS of Maryland & Virginia, Inc. at Westminster
Everest Institute
Gandhi Institute of Health Foundation
GBMC School of Radiography
Holy Cross Hospital School of
Radiologic Technology
I.T. Works Learning Center –Manor Care
I.T. Works Learning Center –THI @ Franklin Square
Medix School
Medix School - West
National Phlebotomy Association
Quality First Training Center, Inc.
Sanford-Brown Institute
Sanz School
The Johns Hopkins Hospital Schools of Medical Imaging
Washington Adventist Hospital
School of Radiography

AUDIO-VIDEO/RADIO/TV

Broadcasting Institute of Maryland
The Omega Studios School of Applied Recording Arts and Sciences
The Sheffield Institute for the Recording Arts

BARBER

Academy of Professional Barber Stylists
American Beauty Academy
Avara's Academy of Hair Design
Bladensburg Barber School
Int'l Academy Hair Design & Tech-Pratt Street
The Fila Academy

BARTENDING

Authentic Bartending School of Maryland
Baltimore Bartender School
Maryland Bartending Academy

CABLING

Lincoln Technical Institute

COMPUTER

Academy of Computer Education (ACE)
AccuTech Career Institute
American Computer Utopia
ASM Educational Center
Computer Institute
ComputerTraining.com at Annapolis Junction, Maryland LLC
ComputerTraining.com at Towson, Maryland LLC
GlobalTech Bilingual Institute
Harmony Institute
Innovative Exchange, Inc. (IXI)
Lincoln Technical Institute
New Horizons Computer Learning Center
Orange Technical Institute
Software Technology Computer
Training Center, Inc. - Hollywood

CONSTRUCTION

Building Specs Inc. Training School
North American Trade School

COSMETOLOGY\MANICURIST

Aaron's Academy of Beauty
Aesthetics Institute of Cosmetology
American Beauty Academy
American Beauty Academy - Baltimore
Aspen Beauty Academy
Aspen Beauty Academy-Laurel
Award Beauty School
Baltimore Studio of Hair Design
Blades School of Hair Design
Del-Mar-Va Beauty Academy
Elitist Hair Academy, LLC
Empire Beauty School
Fame School of Nail Design
Frederick School of Cosmetology
Hair Academies-New Carrollton
Hair Expressions Academy
Harmon's Beauty School
International Beauty School-Bel Air
International Beauty School-Cumberland
Madison Institute of Cosmetology
Maryland Beauty Academy Chartley Park Shopping Center
Maryland Beauty Academy-Essex
Medix School - West
Montgomery Beauty School
New Creations Academy of Hair Design
Renaissance Institute of Cosmetology

Robert Paul Academy of Cosmetology
Arts & Sciences
The Fila Academy
THE TEMPLE: A Paul Mitchell Partner School

CULINARY ARTS

L'Academie de Cuisine

DOG GROOMING

Baltimore School of Dog Grooming

DRY CLEANING

International Fabricare Institute

FINANCE

Millennium Training Services
The Accounting and Bookkeeping Center, Inc.

HEATING AIR-CONDITIONING & REFRIGERATION

Lincoln Technical Institute

MAKEUP\SKIN CARE

Aesthetics Institute of Cosmetology
Baltimore School of Massage
Chesapeake School of Esthetics:
Skin Care and Makeup Artistry
Elitist Hair Academy, LLC
Fame School of Nail Design
Hair Expressions Academy
Lasting Effects™ Permanent Cosmetic Training Institute
Madison Institute of Cosmetology
The Fila Academy
Von Lee Int'l School of Aesthetics

MASSAGE

AccuTech Career Institute
Americare School of Allied Health-Silver Spring
Baltimore School of Massage
Holistic Massage Training Institute
Massage Institute of Maryland, Inc.

MECHANIC TECHNOLOGY

Lincoln Technical Institute
North American Trade Schools

MODELING/PHOTOGRAPHY

Washington School of Photography

MONTESSORI TEACHER

Institute of Advanced Montessori Studies

Maryland Center for Montessori Studies
Montgomery Montessori Institute

POLYGRAPH

Maryland Institute of Criminal Justice

REAL ESTATE

1st Realty Academy
Baldus Institute of Real Estate
Camelot Real Estate Academy
Carruthers Academy of Real Estate, LLC
Century 21 Real Estate School
Century 21/HT Brown Real Estate Institute
Champion Institute of Real Estate
Coldwell Banker Residential Brokerage School of Real Estate
Diana School of Real Estate
Diplomat Real Estate Center
Don Gurney Academy of Real Estate
Ed Smith Real Estate School
Frederick Academy of Real Estate
Housing Consultants Real Estate School
Kelley Academy of Real Estate
Lawyers Advantage Career School
Long & Foster Institute of Real Estate
Mackintosh School of Real Estate
New Millennium Real Estate School
O'Brien Institute of Real Estate
Sawyer & Associates Real Estate Academy, Inc.
Southern Maryland Association of Realtors® Institute of Real Estate
The GBBR® School of Real Estate
The Professional Development Institute
The Real Estate Institute
Universal School of Real Estate
Weichert Real Estate School

TAX PREPARATION

H&R Block Eastern Enterprises, Inc.
Jackson Hewitt Tax School – Annapolis
Jackson Hewitt Tax School – Baltimore-Eastern
Jackson Hewitt Tax School – Baltimore-Kingston
Jackson Hewitt Tax School – Bel Air
Jackson Hewitt Tax School – Catonsville
Jackson Hewitt Tax School – Eldersburg
Jackson Hewitt Tax School – Elkton
Jackson Hewitt Tax School – Forestville
Jackson Hewitt Tax School – Fort Washington
Jackson Hewitt Tax School – Gaithersburg-Diamond
Jackson Hewitt Tax School – Hagerstown
Jackson Hewitt Tax School – Hampstead
Jackson Hewitt Tax School – Hyattsville
Jackson Hewitt Tax School – Prince Frederick
Jackson Hewitt Tax School – Salisbury
Jackson Hewitt Tax School – Severn

Jackson Hewitt Tax School – Temple Hills
Jackson Hewitt Tax School – Waldorf
Liberty Tax Service Tax School – Abingdon
Liberty Tax Service Tax School – Baltimore II
Liberty Tax Service Tax School – Columbia
Liberty Tax Service Tax School – Cumberland
Liberty Tax Service Tax School – Easton
Liberty Tax Service Tax School – Perry-Hall
Liberty Tax Service Tax School – Salisbury
Saunders Tax School

TRAVEL

Bennett School of Travel
Maryland School of Travel

TRUCK DRIVING

All-State Career School
North American Trade Schools
Southern Maryland Tri-County Community Action Committee, Inc.

WELDING

Delta School of Trades

APPENDIX D

Average SAT Scores of 2006 Maryland Public High
School Seniors taking the SAT
By Ethnicity

	Avg. Critical Thinking	Avg. Math	N
African-American	426	416	9,086
Native American	469	477	175
Asian	529	588	2,823
Hispanic	477	483	1,086
White	535	549	17,082
Foreign			
All Other	509	512	1,109
Unknown	456	453	3,204
TOTAL	495	504	34,939

Note: Does not include Mexican Americans (N=181)
and Puerto Rican (N=193)

Source: College Board, Maryland State Report, August
2006

Prepared by: USM Office of Institutional Research

APPENDIX E

- 1. Percentage of Total State General Funds Appropriated to Higher Education FY 1998-2007 (in Millions)**
- 2. Change in Resident Undergraduate Tuition and Fees and State Appropriations by Year: FY 1998-2007**

1. Percentage of Total State General Funds Appropriated to Higher Education

FY 1998-2007 (in Millions)

	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Total Higher Education Appropriations	\$876.8	\$941.4	\$1,042.9	\$1,177.1	\$1,282.8	\$1,216.8	\$1,140.1	\$1,175.6	\$1,268.8	\$1,440.4
Total State General Fund Appropriations	7,859.1	8,543.9	9,031.5	10,237.5	10,572.3	10,364.2	10,261.5	11,275.2	12,356.4	14,133.5
Higher Education as Percentage of Total	11.2%	11.0%	11.5%	11.5%	12.1%	11.7%	11.1%	10.4%	10.3%	10.2%

Notes:

1) Represents general fund expenditures for FY 1998-2006, and general fund appropriations for FY 2007 as reported in the Fiscal Digest and by the Department of Budget and Management.

Sources: Department of Budget and Management, Fiscal Digest

2. Change in Resident Undergraduate Tuition and Fees and State Appropriations by Year: FY 1998-2007

